

CLAIMS

1. A mote method comprising:
adjusting a field of regard of a first-mote directional antenna;
monitoring one or more indicators of a received signal strength of the first-mote directional antenna; and
determining a direction associated with a second mote in response to the monitored one or more indicators of the received signal strength of the first-mote directional antenna.
2. The method of Claim 1, wherein said adjusting a field of regard of a first-mote directional antenna further comprises:
moving the field of regard such that the field of regard of the first-mote directional antenna will likely operably align with a beam of a second-mote directional antenna.
3. The method of Claim 2, wherein said moving the field of regard such that the field of regard of the first-mote directional antenna will likely operably align with a beam of a second-mote directional antenna further comprises:
rotating the field of regard at a rate of rotation varied by a quasi-random amount from a nominal rate of rotation of the first-mote directional antenna and the second-mote directional antenna.
4. The method of Claim 2, wherein said moving the field of regard such that the field of regard of the first-mote directional antenna will likely operably align with a beam of a second-mote directional antenna further comprises:
moving the field of regard through at least two angles at a quasi-randomly selected rate of movement.

5. The method of Claim 2, wherein said moving the field of regard such that the field of regard of the first-mote directional antenna will likely operably align with a beam of a second-mote directional antenna further comprises:

moving the field of regard for a quasi-randomly selected period of time.

6. The method of Claim 1, wherein said adjusting a field of regard of a first-mote directional antenna further comprises:

selectively varying one or more relative phases respectively associated with one or more antenna elements.

7. The method of Claim 6, wherein said selectively varying one or more relative phases respectively associated with one or more antenna elements further comprises:

selectively varying one or more relative dielectric constants respectively associated with the one or more antenna elements.

8. The method of Claim 6, wherein said selectively varying one or more relative phases respectively associated with one or more antenna elements further comprises:

selectively switching one or more delay elements respectively associated with the one or more antenna elements.

9. The method of Claim 6, wherein said selectively varying one or more relative phases respectively associated with one or more antenna elements comprises:

selectively displacing the one or more antenna elements.

10. The method of Claim 1, wherein said adjusting a field of regard of a first-mote directional antenna further comprises:

selectively displacing at least a part of the first-mote directional antenna.

11. The method of Claim 10, wherein said selectively displacing at least a part of the first-mote directional antenna further comprises:

selectively adjusting a feed of a horn antenna.

12. The method of Claim 1, wherein said adjusting a field of regard of a first-mote directional antenna further comprises:

selectively tuning the first-mote directional antenna.

13. The method of Claim 1, wherein said monitoring one or more indicators of a received signal strength of the first-mote directional antenna further comprises:

logging one or more indicators of the received signal strength of the first-mote directional antenna.

14. The method of Claim 1, wherein said determining a direction associated with a second mote in response to the monitored one or more indicators of the received signal strength of the first-mote directional antenna further comprises:

selectively varying a reception frequency.

15. The method of Claim 14, wherein said selectively varying a reception frequency further comprises:

maintaining a first reception frequency during a first rate of movement.

16. The method of Claim 15, further comprising:

maintaining a second reception frequency during a second rate of movement.

17. The method of Claim 1, wherein said determining a direction associated with a second mote in response to the monitored one or more indicators of the received signal strength of the first-mote directional antenna further comprises:

determining a substantially maximum signal power associated with a beacon signal; and

determining a direction of the field of regard of the first-mote directional antenna associated with the substantially maximum signal power.

18. The method of Claim 1, further comprising:

adjusting the field of regard of the first-mote directional antenna to orient toward the determined direction associated with the second mote.

19. A mote system comprising:
means for adjusting a field of regard of a first-mote directional antenna;
means for monitoring one or more indicators of a received signal strength of the first-mote directional antenna; and
means for determining a direction associated with a second mote in response to the monitored one or more indicators of the received signal strength of the first-mote directional antenna.

20. A mote method comprising:

adjusting a beam of a second-mote directional antenna; and

transmitting a signal over the beam of the second-mote directional antenna.

21. The method of Claim 20, wherein said adjusting a beam of a second-mote directional antenna further comprises:

selectively forming the beam of the second-mote directional antenna.

22. The method of Claim 20, wherein said adjusting a beam of a second-mote directional antenna further comprises:

selectively switching the beam of the second-mote directional antenna.

23. The method of Claim 20, wherein adjusting a beam of a second-mote directional antenna further comprises:

selectively steering the beam of the second-mote directional antenna.

24. The method of Claim 20, wherein said adjusting a beam of a second-mote directional antenna further comprises:

selectively adapting the beam of the second-mote directional antenna.

25. The method of Claim 20, wherein said adjusting a beam of a second-mote directional antenna further comprises:

moving the beam such that the beam of the second-mote directional antenna will likely operably align with a field of regard of the first-mote directional antenna.

26. The method of Claim 25, wherein said moving the beam such that the beam of the second-mote directional antenna will likely operably align with a field of regard of the first-mote directional antenna further comprises:

rotating the beam at a rate of rate of rotation varied by a quasi-random amount from a nominal rate of rotation of the second-mote directional antenna and the first-mote directional antenna.

27. The method of Claim 25, wherein said moving the beam such that the beam of the second-mote directional antenna will likely operably align with a field of regard of the first-mote directional antenna further comprises:

moving the beam through at least two angles at a quasi-randomly selected rate of movement.

28. The method of Claim 25, wherein said moving the beam such that the beam of the second-mote directional antenna will likely operably align with a field of regard of the first-mote directional antenna further comprises:

moving the beam for a quasi-randomly selected period of time.

29. The method of Claim 20, wherein said adjusting a beam of a second-mote directional antenna further comprises:

selectively varying one or more relative phases respectively associated with one or more antenna elements.

30. The method of Claim 29, wherein said selectively varying one or more relative phases respectively associated with one or more antenna elements further comprises:

selectively varying one or more relative dielectric constants respectively associated with one or more antenna elements.

31. The method of Claim 29, wherein said selectively varying one or more relative phases respectively associated with one or more antenna elements further comprises:

selectively switching one or more delay elements respectively associated with one or more antenna elements.

32. The method of Claim 29, wherein said selectively varying one or more relative phases respectively associated with one or more antenna elements further comprises:

selectively displacing one or more antenna elements.

33. The method of Claim 20, wherein said adjusting a beam of a second-mote directional antenna further comprises:

selectively displacing at least a part of the second-mote directional antenna.

34. The method of Claim 33, wherein said selectively displacing at least a part of the second-mote directional antenna further comprises:

selectively adjusting a feed of a horn antenna.

35. The method of Claim 20, wherein said adjusting a beam of a second-mote directional antenna further comprises:

selectively tuning the second-mote directional antenna.

36. The method of Claim 20, wherein said transmitting a signal over the beam of the second-mote directional antenna further comprises:

selectively varying a transmission frequency.

37. The method of Claim 36, wherein said selectively varying a transmission frequency further comprises:

maintaining a first transmission frequency during a first rate of movement.

38. The method of Claim 37, further comprising:

maintaining a second transmission frequency during a second rate of movement.

39. The method of Claim 20 wherein said transmitting a signal over the beam of the second-mote directional antenna further comprises:

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detecting an initiation signal; and

initiating at least one of said adjusting a beam of a second-mote directional antenna or said transmitting a signal over the beam of the second-mote directional antenna, in response to said detecting.

40. A mote system comprising:
means for adjusting a beam of a second-mote directional antenna; and
means for transmitting a signal over the beam of the second-mote directional antenna.

41. A mote method comprising:
adjusting a field of regard of a first-mote directional antenna in response to a direction associated with a second-mote directional antenna; and
at least one of transmitting a signal from the first-mote directional antenna or receiving a signal from the first-mote directional antenna.

42. The mote method of Claim 41, wherein said adjusting a field of regard of a first-mote directional antenna in response to a direction associated with a second-mote directional antenna further comprises:
localizing the second-mote directional antenna.

43. The mote method of Claim 42, wherein said localizing the second-mote directional antenna further comprises:
adjusting a field of regard of a first-mote directional antenna;
monitoring one or more indicators of a received signal strength of the first-mote directional antenna signal; and
determining a direction associated with a second mote in response to the monitored one or more indicators of the received signal strength.

44. The mote method of Claim 41, wherein said transmitting a signal from the first-mote directional antenna further comprises:
transmitting the signal over a beam of the first-mote directional antenna.

45. The mote method of Claim 41, wherein said receiving a signal from the first-mote directional antenna further comprises:
receiving the signal through a field of regard of the first-mote directional antenna.

46. A mote system comprising:
means for adjusting a field of regard of a first-mote directional antenna in response to a direction associated with a second-mote directional antenna; and
at least one of means for transmitting a signal from the first-mote directional antenna or means for receiving a signal from the first-mote directional antenna.